



Docket No. 02671/4
Serial No. 10/034,119

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : Lloyd, Carter
SERIAL NO. : 10/034,119
FILED : January 3, 2002
FOR : Shingle Remover
GROUP ART UNIT : 3723
EXAMINER : Smith, James G.

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APPEAL BRIEF

Appellants respectfully submit this Appeal Brief in support of their appeal from the final rejection in this application.

Real Party in Interest

The real party in interest is the inventor, Carter F. Lloyd.

Related Appeals and Interferences

No other appeals or interferences are known to the Appellant, which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims

The application was filed with 16 claims. Claims 17-60 were added. Claims 1, 2, 15, 49, 53, 56 and 57 were amended during prosecution. Claims 1-48 were canceled. Claims 49-60 are pending and stand rejected under 35 USC 103(a). The Appellant appeals the rejection of all pending claims.

Status of Amendments

No Amendments were filed after the Final Rejection of October 31, 2003.

Summary of Invention

The present invention is directed to an apparatus and method for removing a shingle without disturbing or damaging the shingles surrounding the same.

As set forth in the specification at paragraph [0003]:

It is known to remove a shingle by removing the nails that fasten the shingle to the substrate. The nails can be sheared off using a blade slipped under the shingle, or pried out. Both methods require disturbing the shingle, and often surrounding shingles, to get to the nails. Tools that implement this technique can disadvantageously disturb and damage shingles that surround the one to be removed.

According to embodiments of the invention, two gripping members in the form of an upper gripping member and a lower gripping member are connected to one another and configured and disposed relative to one another so that they may be urged together by a gripping mechanism to grip a shingle therebetween. An impact transmitting member is in turn connected to the gripping mechanism, and is configured for transmitting an impact to both gripping members to remove the shingle from its support.

For removing a shingle with a shingle remover according to embodiments of the present invention, a user urges the upper and lower gripping members toward one another using the gripping

mechanism and grips a shingle therebetween. The user then transmits an impact of sufficient magnitude to the upper and lower gripping members through the impact transmitting member, which impact gets transmitted to the shingle and removes the shingle from its support. Use of the shingle remover according to embodiments of the present invention advantageously results in the removal of a shingle from its support without disturbing or damaging any of the surrounding shingles. *See* paragraph [0004] spanning pages 1 and 2 of the specification.

Figure 1 of the application is reproduced below, and shows an embodiment of the present invention.

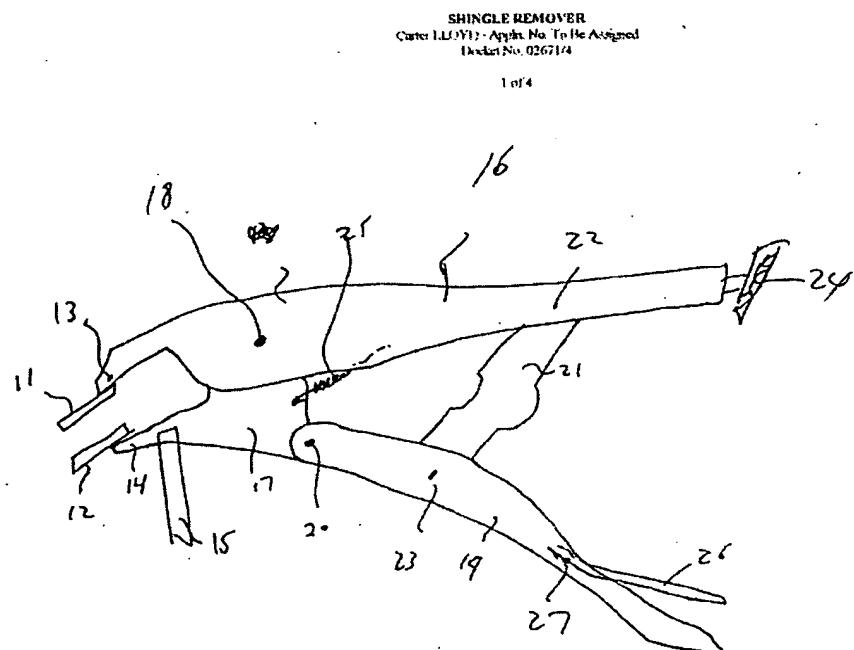


FIGURE 1

As depicted in Figure 1, in the shown embodiment, the shingle remover includes locking pliers 10, where the upper gripping member comprises an upper jaw 13 and an upper plate 11 connected thereto, and the lower gripping member comprises a lower jaw 14 and a lower plate 12 connected thereto. The gripping mechanism comprises an upper handle 16 and a lower handle 19 terminating at their distal ends with the upper jaw 13 and lower jaw 14, respectively. The impact transmitting member in turn includes an anvil 15 fixed to jaw member 17 defining the lower jaw. Upper handle 16 is threaded at its proximal end to receive an adjustment screw 24, which helps to adjust the distance of the upper and lower plates 11 and 12 with respect to each other in a gripping position, thus adjusting the force applied to a shingle by the plates.

In operation, the upper jaw 13 and lower jaw 14 are urged toward each other by gripping the upper handle 16 and lower handle 19 and by in turn urging them toward each other. Once the opposing plates 11 and 12 are gripping a shingle therebetween, a sudden force may be applied to the anvil 15, such as with a hammer, in order to remove the shingle. Referring to paragraph [0014], spanning pages 4 and 5, the specification states as follows regarding the embodiment of Figure 1:

An embodiment of the present invention is used by gripping the bottom of the shingle to be removed with upper plate 11 on one side of the shingle, and lower plate 12 on the other side of the shingle. Once the opposing plates 11 and 12 are gripping the shingle, a sudden force is applied to the pliers, for example, by hitting anvil 15 with a hammer. The nails in the shingle are then pulled out, shear off, or the shingle itself rips off of the nails. In this way, the shingle is removed. If a nail remains in the substrate, it can be sheared off by slipping a flat blade along the substrate and shearing the nail off by imparting a sudden force to the end of the blade, e.g., by striking a blow with a hammer on the lower end of the blade. Alternatively, the nail can be pushed further into the substrate, e.g., by pushing it in by sliding a

blade over the top of the nail, and then pushing or hammering the blade towards the substrate, thereby pushing in the nail.

According to second embodiment of the present invention, the impact transmitting member may include an elongated rod coupled to the anvil including a sliding hammer thereon. An example of the second embodiment of the present invention is depicted in Figure 2 of the application, which is reproduced below:

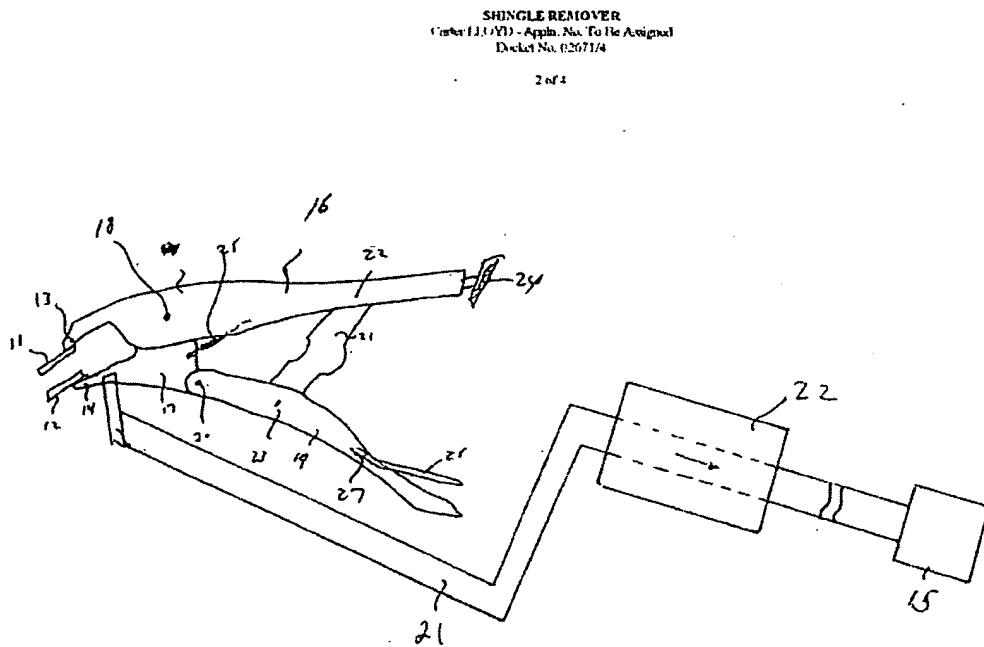


Figure 2

As set forth in paragraph 15 of the specification, at page 5:

Another embodiment of the present invention is shown in Figure 2.

Anvil 15 is coupled to lower jaw 14 with an elongated rod 21.

Elongated rod can be fixed to lower jaw 14 by a weld, by screws (not shown), etc. Elongated rod may be straight, curved, or otherwise bent.

Sliding hammer 22 is mounted on elongated rod 21, such that sliding

hammer 22 may slide up and down elongated rod 21. In particular, sliding hammer 22 may be slid down elongated rod 21 away from said upper jaw 13 and lower jaw 14, to strike anvil 15, thereby exerting force on the apparatus to pull a shingle that is gripped between upper plate 11 and lower plate 12, thereby removing it from the roof.. Anvil 15 should be an enlargement of the elongated rod 21, or otherwise wider than elongated rod 21, so as to provide a striking surface or area of increased friction for sliding hammer 22.

According to another embodiment of the present invention, the upper plate may be pivotally connected to the upper jaw, an example of which embodiment is shown in Figure 3 of the application reproduced below:

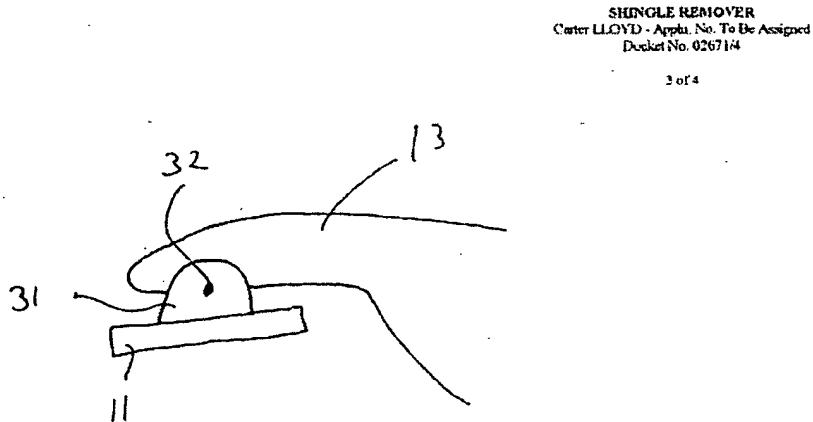


Figure 3

Advantageously, an embodiment of the present invention as shown in Figure 3 enhances the upper plate 11's ability to be positioned to lie substantially flat on a shingle, thereby enhancing the gripping force of the shingle remover. *See paragraph [0019] at page 6.*

Two independent claims are pending in this application, claims 49 and 56.

The present invention as recited in claim 49 pertains to an apparatus for gripping and removing a shingle fixed to a support. The apparatus comprises an upper gripping member defining a substantially flat first gripping surface and a lower gripping member defining a substantially flat second gripping surface. A gripping mechanism connects the upper and lower gripping members to one another, and is configured for urging the gripping members toward one another for gripping the shingle therebetween. An impact transmitting member is connected to the gripping mechanism, and is configured for transmitting an impact to both the upper and lower gripping members for removing the shingle from the support when the shingle is gripped between the upper and lower gripping members. The first and second gripping surfaces are configured and disposed relative to one another such that, when the apparatus grips the shingle, each of the first and second gripping surfaces applies a force evenly distributed along an entire width thereof.

The present invention as recited in claim 56 pertains to a method for removing a shingle fixed to a support. The method includes: gripping the shingle between a first flat gripping surface and a second flat gripping surface of respective upper and lower gripping members of a gripping apparatus such that each of the first and second flat gripping surfaces applies a force evenly distributed along an entire width thereof; and transmitting an impact to both the upper and lower gripping members when the shingle is gripped there between for removing the shingle from the support.

Ten dependent claims are pending in the instant application. Of those claims, dependent claim 60 depends from dependent apparatus claim 50, and pertains to an upper plate which is pivotally attached to the upper jaw.

Issues

Do claims 49-55 (apparatus claims) and 56-59 (method claims) patentably distinguish over Small (U.S. Patent No. 4,669,341) in view of Verna (U.S. Patent No. 4,386,542) under 35 USC 103(a)?

Does claim 60 (method claim) patentably distinguish over Small in view of Verna and further in view of Wang (U.S. Patent No. 5,964,130) under 35 USC 103(a)?

Grouping of Claims

The claims may be grouped as follows:

- A. Claims 49-59.
- B. Claim 60.

The claims in these groups do not stand or fall together unless so indicated below in the argument.

Argument

I. The References

- A. Small:

Small pertains to an extraction device “such as is particularly adapted for removing pins from flywheels of clutch assemblies used in automobiles.” Col. 1, first paragraph. The aim of Small is to removed pins, which “in addition to being unheaded, are quite strongly embedded in the assembly.” Col. 1, lines 13-15. Small describes his invention as being applicable for firmly gripping “workpieces” having “various sizes and diameters.” Col. 3, second full paragraph. Small is therefore concerned with the problem of removing firmly embedded pins that do not present a configuration, such as a pin head, that would facilitate their being gripped for removal. Small is further concerned with the removal of such pins through the application of an impact force.

As seen in Figs. 1 and 2 of Small, the workpiece to be extracted is a pin 10 to be pulled out using the gripping device 12. An impacting hammer 30 is coupled to the gripping device 12. The gripping device includes jaw subassemblies 40 and 60. Jaw subassembly 40 includes a single gripping tooth 41 mounted substantially orthogonally to the direction of pull. Jaw subassembly 60 may have a conventional design, as shown in U.S. Pat. No. 2,514,130, or may includes a single gripping tooth 61 similar to subassembly 40. Col. 2, last 6 lines, and col. 3, lines 19-23. As shown

in Fig. 2, tooth 41 has a biting edge 47 oriented transverse to the direction of pull and may be limited to protrusion just below a cutout in subassembly 40, which cutout may have a back wall 48 and a curvature 50 which is matched in diameter to the largest diameter pin to be pulled. Col. 4, lines 30-36.

As set forth in Col. 4, line 59 to col. 5, line 3 with respect to Figs. 1 and 2:

After the gripping device 12 is thus applied to and locked in gripping relation on the preselected pin, the workman grasps the impact weight 34 and then the weight of member 34 is manually moved to impact it against the abutment 33 in such number of strokes as may be necessary to effect complete withdrawel [sic] of the pin 10. The impacting force manifestly will be transmitted as tension through the guide 31, the anchor 32 and the fixed clamping or gripping member 13, the jaw pivot 16 and jaws 15 and 17, to the pin 10, in a manner so as to remove the pin 10 with improved grip and maximum force.

B. Verna:

Verna pertains to a gripping tool having specific application for use with sheet metal work, as for example in connection with automobile repair. Col. 1, first paragraph. According to Verna, a locking plier type of device is provided with very large gripping jaw surfaces that are serrated to provide a strong gripping force on a sheet metal clamped therebetween to "permit the exertion of very strong pulling forces on sheet metal panels of substantial size." Col. 1, third full paragraph. As seen in Fig. 1, a tool 10 having two gripping jaws 16 and 19 that having arcuate teeth or serrations 22 and 23 thereon, respectively. An eye 11 is fixedly secured to arm 12 of tool 10 in the form of a pulling ring 14 as shown. Referring to Fig. 5, and to the paragraph spanning columns 2 and 3, Verna states:

Referring now to FIG. 5, there is seen a portion of a piece of sheet metal 26 having wrinkles or bends 27 in it and to which is clampingly

attached the gripping tool 10. A cable 28 is hooked into the pulling ring 14 at one end and has its opposite end passed downward through a floor anchor 29 from which it extends to the left for securement to a winch (not shown). The piece of sheet metal 26 could for example be a portion of an automobile fender or the floor of an automobile trunk or any other piece of dented or wrinkled sheet metal. The strong force exertable by the winch through the cable 28 causes the gripping tool 10 to be pulled in such a direction as to straighten out the wrinkles in the sheet metal. It is the tenacious grip of the gripping tool platens which permits such strong pulling forces to be exerted without having the locking plier pull loose from the sheet metal. As previously pointed out, each of the platens 16 and 19 may be on the order of an inch and a half square, but could be somewhat smaller or somewhat larger depending upon the particular application of intended use.

As set forth above, it is a winch that applies force to the toll 10. As defined in www.websters.com, a winch is defines as “[a] stationary motor-driven or hand-powered machine used for hoisting or hauling, having a drum around which is wound a rope or chain attached to the load being moved.” As would be recognized by one skilled in the art, a winch is used to apply a continuous force, as opposed to an impact force.

Clearly, Verna is concerned with providing a tool that can grip a sheet metal that is bent/wrinkled with sufficient force to allow a straightening of the bends/wrinkles of the sheet metal through the application of a continuous force.

C. Wang:

Wang pertains to a pair of locking pliers having two jaw members. One of the jaw members has a function member which is pivotally mounted to an inner side thereof. Reference

is made to Fig. 1, where a first jaw member 111 has a first function surface 1112 and a second function surface 1111 that is inclined with respect to a longitudinal axis of a first handle 11 toward a second jaw member 112. The second jaw member 112 has a function member pivotally mounted thereon. The assembly allows a gripping of tubular objects as shown in Fig. 5, or of rectangular or hexagonal objects as shown in Figs. 6 and 7.

Wang is concerned with gripping objects with locking pliers that are configured such that a longitudinal axis of the pliers is substantially non-parallel with a longitudinal axis of the object to be gripped, as clearly shown in the figures.

II. Requirements for Establishing Obviousness

The requirements for establishing a prima facie case of obviousness are set out in M.P.E.P 702(j) as follows:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP Section 2143 - Section 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed

invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP Section 2144 - Section 2144.09 for examples of reasoning supporting obviousness rejections.

As will be explained in more detail below, Appellant submits that the Examiner has not met this burden. As will be explained below, Examiner has pointed to nothing that provides "some suggestion of the desirability of doing what the inventor has done."

III. Formal Inconsistencies in the Office Action of October 31, 2003

First, it is noted that the Examiner has rejected claims 56-60 as being obvious over "Small in view of Verna as applied to claims 49-55 above, and further in view of Wang." It appears that the grouping of claims 56-60 together in the obviousness rejection may have been an oversight on the part of the Examiner, to the extent that Wang has been applied in the Office Action of October 31, 2003 only by virtue of its disclosure of a "pivotally attached jaw plate," which feature does not appear in any of claims 56-59. In addition, it is not seen why the Examiner has rejected claims 56-59 as obvious over "Small in view of Verna as applied to claims 49-55 above," to the extent that claims 56-59 are not dependent from any of claims 49-55. It appears that the Examiner may have confused the scope of claim 60 with that of method claims 56-59, to the extent that claims 56-59 are not limited to pivoting plates. Although Appellant clearly traverses all of the rejections applied against the claims by the Examiner and finds them to have no basis legally and/or in fact, as will be explained in further detail below, it appears nevertheless that, at least under the Examiner's own reasoning, and only under the Examiner's own reasoning, the obviousness rejection over Small in view of Verna could have arguably been applied against claims 49-59 as a group, and the obviousness rejection over Small in view of Verna and further in view of Wang could have arguably been applied against claim 60 as a "group."

It is for the above reasons that the “Issues” identified above, along with the “Grouping of Claims” identified above, point to claims 49-59 on the one hand, and thereafter to claim 60 on the other hand. To the extent that the obviousness rejection over Small in view of Wang has in any event been applied against all of the pending claims, Appellant deems the above approach to be a more sound one in light of the circumstances mentioned above.

III. Claims 49-55 and 56-59 are not obvious over Small in view of Verna

Appellant submits that there exists no motivation to combine Small and Verna as suggested by the Examiner.

As set forth in Section I.A. with respect to Small above, Small is concerned with the problem of removing firmly embedded pins that do not present a configuration, such as a pin head, that would facilitate their being gripped for removal. Small is further concerned with the removal of such pins through the application of an impact force. As noted above, the structure in Small is directed toward gripping a workpiece presenting little surface for gripping, such as a pin, and, in particular, such as a pin having a cylindrical body. Col. 4, lines 33-36. Small’s aim is to provide a tool that can grip a pin with sufficient force to allow the same to be removed from a support through the application of an impact force. Verna’s aim, on the other hand, is to provide a tool that can grip a piece of sheet metal having bends/wrinkles with sufficient force to allow the same to be straightened through the application of a continuous force. In fact, Small and Verna have nothing to do with each other.

The motivation that is missing from both of these references is among others the need/desirability to remove a flat object from its support. Nowhere does Small contain any disclosure or suggestion that its tool may be modified/used to grip flat objects, much less that its tool may be modified/used to remove flat objects from their support, or even generally, that the removal of flat objects from their support would be a desirable aim. In fact, the crux of Small is the provision of a tool that can grip small objects that are difficult to grip, hence the single tooth 41 on jaw subassembly 40 meant to grip a small pin in cooperation with jaw 60, hence referrals to structure such as a “curvature 50 which is matched in diameter to the largest diameter pin to be pulled.” Col.

4, lines 33-56. Small is concerned with the particular problem of removing small, hard to grip objects, and provides a particular solution for this problem. In addition, nowhere does Verna contain any disclosure or suggestion that its tool may be modified/used to remove flat objects from their support, much less that its tool may be modified/used to remove flat objects from their support through the application of an impact force, or even generally, that the removal of flat objects from their support would be a desirable aim. Verna is concerned with the particular problem of flattening bent/wrinkled pieces of sheet metal, and provides a particular solution for this problem. A person having both Small and Verna before her would in fact find disincentives for modifying Small in view of Verna, since doing so would deprive Small of its primary aim of effectively gripping pin-like workpieces for their removal. In addition, nothing in Verna would suggest to a person of ordinary skill that Verna's tool would in fact be apt to be used to transmit an impact force to the object to be gripped. First, Verna explicitly discloses the application of a continuous force rather than an impact force. Second, the application of an impact force in the circumstances in which Verna's tool is to be applied would in fact be counterintuitive, to the extent that, as would be clearly recognized by one skilled in the art, applying an impact force would be more likely to cause sheering forces apt to damage a piece of the bent/wrinkled sheet metal rather than to repair the same.

The only suggestion for the combination clearly comes from Appellant's own specification. In this respect, it is clear that the Examiner is using impermissible hindsight. The Examiner has therefore failed to meet the burden of establishing a *prima facie* case of obviousness against claims 49-59.

Accordingly, Appellant's respectfully request that the Board reverse the Examiner's rejection of claims 49-59 as obvious over Small in view of Verna.

IV. Claim 60 is not obvious over Small in view of Verna and further in view of Wang

Claim 60 is not obvious over Small in view of Verna and further in view of Wang for the reasons set forth above with respect to claim 50, from which claim 60 depends, and also for the following reasons.

As explained above, Wang is concerned with gripping objects with locking pliers that are configured such that a longitudinal axis of the pliers is substantially non-parallel with a longitudinal axis of the object to be gripped, as clearly shown in the figures. However, both Small and Verna are concerned with providing a tool that applies a force substantially along a longitudinal axis of the object to be gripped. There would therefore be no motivation to modify either Small or Verna in view of Wang, or, assuming only for argument's sake that Small and Verna could be reasonably combined, to modify Small in view of Verna in view of Wang. The only motivation for such a combination comes from Appellant's own disclosure. Thus, the Examiner is using impermissible hindsight.

Accordingly, Appellant's respectfully request that the Board reverse the Examiner's rejection of claim 60 as obvious over Small in view of Verna and further in view of Wang.

Conclusion of Argument

As a whole, the Examiner has failed to establish a prima facie case of obviousness with regard to any claim. The references, either alone or in combination, simply do not deal with the same problem nor do they suggest the solution claimed. The only place one finds that is in Appellant's specification. What the Examiner has done is to engage in impermissible hindsight reconstruction after reviewing Appellant's disclosure. Motivation leading to obviousness must be established from the prior art. The Examiner has not done this. Appellants therefore respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's decision rejecting claims 49-60 and direct the Examiner to pass the case to issue.

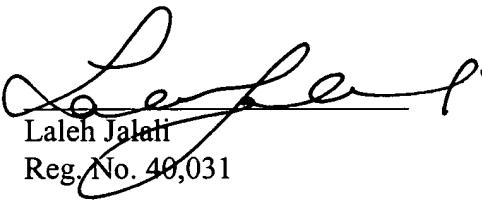
Fee Authorization

The Commissioner is authorized to charge the fee for this appeal brief of \$320.00 as set forth in 37 C.F.R. § 1.17(c) to Deposit Account No. 11-0600.

Respectfully submitted,

KENYON & KENYON

Dated: 04-08-04

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Appendix

Brief of Appellant Carter F. Lloyd
U.S. Patent Application Serial No. 10/034,119

49. An apparatus for gripping and removing a shingle fixed to a support comprising:
an upper gripping member defining a substantially flat first gripping surface;
a lower gripping member defining a substantially flat second gripping surface;
a gripping mechanism connecting the upper and lower gripping members to one another,
the gripping mechanism being configured for urging the gripping members toward one another
for gripping the shingle therebetween; and
an impact transmitting member connected to the gripping mechanism, the impact
transmitting member being configured for transmitting an impact to both the upper and lower
gripping members for removing the shingle from the support when the shingle is gripped
between the upper and lower gripping members;

wherein:

the first and second gripping surfaces are configured and disposed relative to one
another such that, when the apparatus grips the shingle, each of the first and second gripping
surfaces applies a evenly distributed along an entire width thereof.

50. The apparatus of claim 49, wherein:
the upper gripping member comprises an upper jaw and an upper plate connected thereto;
the lower gripping member comprises a lower jaw and a lower plate connected thereto;
the gripping mechanism comprises an upper handle and a lower handle, the upper handle
being connected to the upper jaw and the lower handle being connected to the lower jaw; and
the impact transmitting member comprises an anvil rigidly connected to the lower jaw.

51. The apparatus of claim 50, further comprising:
a jaw member rigidly connected to the lower jaw and pivotally connected to the upper

handle and to the lower handle;

an adjustment screw connected to the upper handle;

a spring attached at one end thereof to the jaw member and at another end thereof to the upper handle; and

a linking member pivotally attached at one end thereof to the lower handle, and abutting the adjustment screw at another end thereof.

52. The apparatus of claim 50, wherein the anvil is oriented at about a 90 degree angle to the lower plate.

53. The apparatus of claim 50, wherein the upper plate is fixedly attached to the upper jaw.

54. The apparatus of claim 50, wherein the lower plate is fixedly attached to the lower jaw.

55. The apparatus of claim 50, wherein the impact transmitting member further comprises an elongated rod fixedly attached to the anvil, a sliding hammer slidably disposed on the rod, and a striking surface connected to the rod.

56. A method for removing a shingle fixed to a support comprising:
gripping the shingle between a first flat gripping surface and a second flat gripping surface of respective upper and lower gripping members of a gripping apparatus such that each of the first and second flat gripping surfaces applies a force evenly distributed along an entire width thereof; and
transmitting an impact to both the upper and lower gripping members when the shingle is gripped there between for removing the shingle from the support.

57. The method of claim 56, wherein:

gripping comprises gripping the shingle between an upper jaw of the apparatus having an upper plate and a lower jaw of the apparatus having a lower plate; and transmitting an impact comprises striking an anvil fixedly connected to the lower.

58. The method of claim 57, wherein:

gripping the shingle comprises gripping a shingle attached to the support with at least one nail;

transmitting an impact comprises one of shearing off the at least one nail when the shingle is removed from the support and ripping off the at least one nail when the shingle is removed from the support.

59. The method of claim 57, wherein transmitting an impact comprises actuating a sliding hammer on an elongated rod attached to the anvil for striking an impact surface connected to the rod thereby transmitting the impact to upper and lower jaws for removing the shingle.

60. The apparatus of claim 50, wherein the upper plate is pivotally attached to the upper jaw.